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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHANG, SHIRLEY	
ART UNIT	**PAPER NUMBER**
2614	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/855,424	HORNSBY ET AL.	
	Examiner	Art Unit	
	Shirley Chang	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Response to Arguments

Applicant's arguments filed on 10/24/05 have been fully considered but they are not persuasive with respect to arguments pertaining to the amended limitations and the applied art of record not teaching the amended limitations. With respect to applicant's arguments regarding the combination rendering the references unsuitable for their intended use, the examiner respectfully disagrees. The Beyers teaches a headend with a plurality of subscribers, each subscriber has bidirectional transceivers. Dinwiddie discloses a local distribution system with a cable headend, and a transceiver 22; in combination with Beyers there could exist a plurality since Beyers has multiple receivers with multiple subscribers. As to the question posed by the applicant 'what is gained by making the distribution plant more complex,' the office action is not directed toward the headend, but is rather directed toward the receiver, which meets the broad limitations of claims 1, 10, 17, and 20. The examiner respectfully disagrees and refers to the grounds of rejection.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Beyers, II et al. (Beyers) (5235619) in view of Dinwiddie (6481013).

As to claim 1,

Beyers discloses, a two-conductor medium ('coaxial interconnection [42, 56-70]) and a plurality of transceivers (fig. 1; 'The present invention allows bidirectional transmission of messages' [10, 24-44], hence a plurality of transceivers exist associated with each subscriber). However, Beyers does not specifically teach 'A data communication system, comprising: sets of filters wherein the filters of each set are configured to define a respective communication channel over said medium and are coupled to said medium in respective transceivers; said transceivers thereby enabled to communicate data signals over the respective communication channels of said sets.' Dinwiddie et al. teaches: a data communication system (fig. 1); a two-conductor medium ('bi-directional signal transmission over a signal conductor coaxial cable' [2, 36-49]); sets of filters wherein the filters of each set are configured to define a respective communication channel over said medium and are coupled to said medium in respective transceivers (fig. 2; 'high pass frequency filters 86, 87,' 'low pass filters 88, 89' [6, 53-65]); said transceivers thereby enabled to communicate data signals over the respective communication channels of said sets (fig. 1). Accordingly, it would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to modify

Beyers with Dinwiddie, so as to 'make network performance available at a significantly reduced cost' [3, 15-33].

As to claim 2, Dinwiddie et al. disclose:

A transmitter that has an amplifier which couples a filter of each of said sets to said medium to thereby transmit said data signals (high pass filters 86 and 87 are coupled to broadband amplifier 72; fig. 2; [8, 13-33]);

Receivers that are each coupled to said medium by a filter of each of said sets to thereby receive said data signals (low pass filters 88 and 89; 'upstream network signals received are separated through low pass filters 88, 89' [8, 13-33]);

As to claim 3, Dinwiddie et al. disclose:

Each of said transceivers further includes a combiner inserted between said amplifier and said filter of each of said sets (Dinwiddie's system provides support for upstream communication. The transceiver is clearly a combiner because it receives signals from multiple devices. The balum, such as elements 80 and 92 in fig. 2, is a combiner because it is coupled to multiple output ports. The balum is between an amplifier 72 and filters such as 86, 97, 88, and 89).

As to claim 4, Dinwiddie et al. disclose:

the filters of each of said sets have a passband that defines that set's respective communication channel (fig. 2; 'high pass frequency filters 86, 87,' 'low pass filters 88, 89' [6, 53-65]).

As to claim 5, Dinwiddie et al. disclose:

said passband lies in the frequency region below 1000 megahertz ([5, 5-31]).

As to claim 6, Dinwiddie et al. disclose:

said passband has a width that does not substantially exceed 10 megahertz ('low frequency 0-5Mhz digital signals' [8, 13-33]; 'the signals received at terminal 42 are blocked by notch filter 70, which has corner frequencies at 469.25 MHz and 567.25 MHz' [5,50] to [6, 5]).

As to claim 7, Dinwiddie et al. disclose:

said two-conductor medium is a coaxial cable ('single conductor cable such as a coax' [11, 57-67] to [12, 1-20]).

As to claim 8, Dinwiddie et al. disclose:

said two-conductor medium is a twisted pair ('twisted pair conductor' [7, 56] to [8, 1-14]).

As to claim 9, Dinwiddie et al. disclose:

said medium comprises a plurality of medium branches and further including at least one hub transceiver that couples said branches together and amplifies said data signals (figs. 1 and 2; distribution unit 22 includes broadband amplifier 72).

As to claim 10,

As aforementioned, Beyers discloses:

A communication system for communicating data signals over a plurality of different communication channels, comprising: a two-conductor medium (limitations are met as previously discussed and included in claim 1);

Beyers teaches 'a plurality of transceivers,' as previously discussed in claim 1, and Dinwiddie discloses that each include: a) a receiver which has a group of receive filters coupled to receive data signals from said medium (low pass filters 88 and 89; 'upstream network signals received are separated through low pass filters 88, 89' [8, 13-33]);

b) a transmitter which has a group of transmit filters and an amplifier coupled to transmit data signals from said transmit filters to said medium; (high pass filters 86 and 87 are coupled to broadband amplifier 72; fig. 2; [8, 13-33]).

wherein said receive and transmit filters have passbands that are positioned to define said different communication channels ('low frequency 0-5Mhz digital signals' [8, 13-33]; 'high frequency >5.0Mhz' [8, 13-33]; 'the signals received at terminal 42 are blocked by notch filter 70, which has corner frequencies at 469.25 MHz and 567.25 MHz' [5,50] to [6, 5]).

Accordingly, it would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to modify Beyers with Dinwiddie, so as to 'make network performance available at a significantly reduced cost' [3, 15-33].

As to claim 11, Dinwiddie et al. disclose:

said passbands lie in the frequency region below 1000 megahertz (limitations are met as previously discussed and included in claim 5).

As to claim 12, Dinwiddie et al. disclose:

said passbands have widths that do not substantially exceed 10 megahertz (limitations are met as previously discussed and included in claim 6).

As to claim 13, Dinwiddie et al. disclose:

said two-conductor medium is a coaxial cable(limitations are met as previously discussed and included in claim 7).

As to claim 14, Dinwiddie et al. disclose:

said two-conductor medium is a twisted pair (limitations are met as previously discussed and included in claim 8).

As to claim 15, Dinwiddie et al. disclose:

the transmitter of each of said transceivers further includes a combiner that couples said transmit filters to said amplifier (limitations are met as previously discussed and included in claim 3).

As to claim 16, Dinwiddie et al. disclose:

said medium comprises a plurality of medium branches and further including at least one hub transceiver that couples said branches together and amplifies said data signals (limitations are met as previously discussed and included in claim 9).

As to claim 17,

Beyers discloses: A data communication system for communicating data signals, comprising: a coaxial cable network ('coaxial interconnection [42, 56-70]);

Dinwiddie teaches: sets of filters wherein the filters of each of said sets have a passband that defines a respective communication channels in the frequency region below 1000 megahertz ([5, 5-31]).

a plurality of transceivers that each include; a) a receiver that has a filter of each of said sets coupled to said cable network to receive said data signals (low pass filters 88 and 89; 'upstream network signals received are separated through low pass filters 88, 89' [8, 13-33]);

b) a transmitter that has an amplifier and a filter of each of said sets that is coupled by said amplifier to said cable network to transmit said data signals; said transceivers thereby enabled to communicate said data signals over the respective communication channels of said sets (high pass filters 86 and 87 are coupled to broadband amplifier 72; fig. 2; [8, 13-33]).

Accordingly, it would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to modify Beyers with Dinwiddie, so as to 'make network performance available at a significantly reduced cost' [3, 15-33].

As to claim 18, Dinwiddie et al. disclose:

said cable network forms cable branches and further including at least one hub transceiver that couples said cable branches together and amplifies said data signals (limitations are met as previously discussed and included in claim 9).

As to claim 19, Dinwiddie et al. disclose:

said passbands have widths that do not substantially exceed 10 megahertz (limitations are met as previously discussed and included in claim 6).

As to claim 20,

Beyers discloses: A method of communicating data signals, comprising the steps of: transmitting data signals to a two-conductor medium (limitations are met as previously discussed and included in claim 1)
Dinwiddie teaches: through transmit filters whose passbands define respective and different communication channels in the frequency region below 1000 megahertz (limitations are met as previously discussed and included in claim 5); receiving data signals from said medium through a plurality of receive filters whose passbands substantially match respective ones of said transmit filters ('low frequency 0-5Mhz digital signals' [8, 13-33]; 'high frequency >5.0Mhz' [8, 13-33]; 'the signals received at terminal 42 are blocked by notch filter 70, which has corner frequencies at 469.25 MHz and 567.25 MHz' [5,50] to [6, 5]). Accordingly, it would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to modify Beyers with Dinwiddie, so as to 'make network performance available at a significantly reduced cost' [3, 15-33].

As to claim 21, Dinwiddie et al. disclose:

further including the step of amplifying said data signals prior to said transmitting step (broadband amplifier 72 is bidirectional, and data can be transmitted subsequent to amplification at amplifier 72).

As to claim 22, Dinwiddie et al. disclose:

said two-conductor medium is a cable network that forms cable branches and further including the step of amplifying said data signals as they pass between said cable branches ('single conductor cable such as a coax' [11, 57-67] to [12, 1-20]; broadband amplifier 72 is bidirectional, and data can be transmitted subsequent to amplification at amplifier 72).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shirley Chang whose telephone number is (571) 272-8546. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SC

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